Utah Division of Air Quality
New Source Review Section

Form 21
Solvent Metal Cleaning (Degreasers)

Date_____

Company _____

Site/Source_____

Process Information

1. Operating schedule: _____ hrs/day _____ days/wk _____ weeks/year	2. Degreaser Manufacturer:_____ Model no.:_____ Type: ᴳ Conveyorized ᴳ Cold solvent ᴳ Open top vapor ᴳ Batch ᴳ Other_____	3. Metal parts or products cleaned: Description of parts/products: _____ Average number of parts cleaned/hour: _____ Maximum number of parts cleaned per hour:_____

4. Solvent usage: Type: _____ Gallons used during year: _____ Vapor pressure: _____ (Psia @ 100⁷F)	5. Solvent is: ᴳ Sprayed ᴳ Heated, temperature ____? F ᴳ Agitated, by: ᴳ Use of pump ᴳ Compressed air ᴳ Vertical motion ᴳ Ultrasonics ᴳ Other _____
6. Amount of solvent waste disposed of throughout the year: _____ gallons. If known, solvent content in waste (in % by volume)_____ 7. Method of disposal_____	7. Freeboard: a. Distance from solvent surface to top edge of degreaser ____inches b. Width (not length) of tank at solvent surface (in inches) _____ c. Freeboard ratio, (a) above divided by (b) above _____

8. Furnish Manufacturer's Safety Data Sheets for all chemicals used in process.

Cold Cleaner Information

9. Equipped with cover: ᴳ yes ᴳ no Easily operated with one hand? ᴳ yes ᴳ no	10. Tank dimensions: Length: ___ width: ____ height: ___ Tank capacity: _____ gals of solvent	11. Method of draining parts:
12. Cold Cleaner has: ᴳ Water cover ᴳ Refrigerated chiller, operating temperature: _____? F ᴳ Carbon adsorption ᴳ Other control system (attach description): _____ ᴳ None of the above	13. Ventilation: ? Carbon adsorption system (submit form 5) ? None ? Other (describe)	

Open Top Vapor Degreaser and Conveyorized Degreaser Information

14. Dimensions of top opening:

    Length: _____

    Width: _____

15. Cover: �G   yes ☐G no
    Powered: ☐G   yes ☐G no
    Fixed spray
      nozzles: ☐G   yes ☐G no

16. Safety switches:

☐G   Condenser flow switch and thermostat which shuts off the sump heat if the condenser coolant is either not circulating or too warm.

☐G   Device, other than a condenser flow switch and thermostat, which shuts off the sump heat if the condenser coolant is either not circulating or too warm (describe):_____

☐G   Spray safety switch which shuts off the spray pump if the vapor level drops below any fixed spray nozzle.

☐G   Vapor level control thermostat which shuts off the sump heat when the vapor level rises too high.

☐G   Device, other than a vapor level control thermostat, which shuts off the sump heat when the vapor level rises too high (describe):_____

_____

☐G   None of the above.

17. Indicate the type of pollution controls that open top vapor degreaser has (carbon filter, condenser, etc.):

Conveyorized Degreaser Information

18. Type of degreaser system:
    ☐G Cold   ☐G Vapor

19. Operating temperature of solvent?
    _____

20. Downtime covers:
    ☐G yes   ☐G no

21. Air/vapor interface is: _____sq. ft. (provide calculations below)

22. Conveyorized degreaser has:

☐G   None of the below.

☐G   Refrigerated freeboard chiller.

☐G   Refrigerated condenser coils.

☐G   Carbon adsorption.

☐G   Other control system excluding condenser coils and freeboard water jacket, which reduces solvent emission (describe system and % control efficiency).

23. Safety Switches:

☐G   Condenser flow switch and thermostat which shuts off the sump heat if the condenser coolant is either not circulating or too warm.

☐G   Device, other than a condenser flow switch and thermostat, which shuts off the sump heat if the condenser coolant is either not circulating or too warm (describe):_____

☐G   Spray safety switch which shuts off the spray pump if the vapor level drops below any fixed spray nozzle.

☐G   Vapor level control thermostat which shuts off the sump heat when the vapor level rises too high.

☐G   Device, other than a vapor level control thermostat, which shuts off the sump heat when the vapor level rises too high (describe):

_____
_____

☐G   None of the above.

24. Conveyorized degreaser is equipped with the following equipment for preventing cleaned parts from carrying out solvent liquid or vapor:

     ☐G   None   ☐G   Drying tunnel

     ☐G   Rotating basket   ☐G   Other

Emissions Calculations (PTE)

25.   Calculated emissions for each tank
       VOC _____Lbs/hr_____ Tons/yr
       HAPs_____Lbs/hr (speciate)_____Tons/yr (speciate)

Specify the method of calculations. Also, provide manufacture's Material Safety Data Sheets (MSDS) for products being used

Submit calculations as an appendix.

NOTE: 1. **Submit this form in conjunction with Form 1 and Form 2.**

          2. Call the Division of Air Quality (DAQ) at **(801) 536-4000** if you have problems or questions in filling out this form. Ask to speak with a New Source Review engineer. We will be glad to help!

Instructions

1.   Indicate the operating schedule of the degreaser.
2.   Indicate the manufacturer, model number, serial number and type of degreaser.
3.   Indicate the type of parts that will be cleaned in the degreaser (attach details) and the average and maximum number of parts cleaner per hour.
4.   Indicate the type, quantity, and vapor pressure of the solvent used in the degreaser.
5.   Indicate whether the solvent is sprayed, heated, agitated, and to what temperature. Indicate if and how solvent is agitated.
6.   Indicate the amount and way waste solvent is disposed.
7.   Indicate the calculations for freebroad ratio.
8.   Supply the Manufacturer=s Safety Data sheets of any chemicals used with this application.
9.   Indicate whether the degreaser is covered and if that cover is easily operated with one hand.
10. Supply the tank dimensions and capacity.
11. Describe the method of draining the degreased parts.
12. Indicate if any type of controls are used with the system and what they are.
13. Describe the carbon adsorption system if applicable.
14. Give dimensions of top opening.
15. Indicate if degreaser is equipped with cover and spray nozzles.
16. Indicate the types of safety switches used on the degreaser.
17. Indicate the type of controls used on the open top vapor degreaser.
18. Tell whether the degreaser uses a cold or a vapor system.
19. Give the operating temperature of the solvent.
20. Indicate whether the conveyorized degreaser has downtime covers.
21. Provide calculations showing the air/vapor interface. This is figured using the dimensions of the open portion of the tank at the condenser level.
22. Indicate the degreaser controls.
23. Indicate the types of safety switches used on the degreaser.
24. Indicate the type of equipment used to prevent carry out emissions.
25. Supply calculations for all criteria pollutants and HAPs. Use AP42 or Manufacturers data to complete your calculations.

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